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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

#### **DETAILED ACTION**

1. Applicants' Response to Advisory Action, received 22 October 2009, is acknowledged. Claims 1, 13 and 14 have been amended. Claim 5 has been cancelled.
2. Claims 1-4 and 8-16 are pending and under consideration.

#### **Rejections/Objections Withdrawn or Moot**

3. The rejection of claim 5 under 35 U.S.C. 112, second paragraph, as being indefinite for steps involved in "analyzing" a nucleotide sequence, a set of one, and "infer a phylogenetic tree", is moot in light of the cancellation of the claim.
4. The objection to claim 1 is withdrawn in light of the amendment of the claim.
5. The rejection of claims 8-15 under 35 U.S.C. 112, second paragraph, dependence from an objected to claim, is withdrawn.

#### **Double Patenting**

When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

6. Claim 3 embodiments SEQ ID NO:6, 7, 12 and 45 are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 3 embodiment SEQ ID NO:2.

The claim is drawn to a polynucleotide consisting of one SEQ ID NO. (chosen from a group consisting of 54 sequences) and polynucleotides complementary thereto.

SEQ ID NO:2 is 100% identical to SEQ ID NOs:6, 7, 12 and 45. Therefore, embodiments directed to SEQ ID NO:6, 7, 12, or 45 are claiming the identical invention of claim embodiment directed to SEQ ID NO:2.

7. Claim 3 embodiment SEQ ID NO:39 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 3 embodiment SEQ ID NO:18.

The claim is drawn to a polynucleotide consisting of one SEQ ID NO. (chosen from a group consisting of 54 sequences) and polynucleotides complementary thereto.

SEQ ID NO:18 is 100% identical to SEQ ID NO:39. Therefore, embodiments directed to SEQ ID NO:39 are claiming the identical invention of claim embodiment directed to SEQ ID NO:18.

8. Claim 4 embodiments utilizing SEQ ID NO:6, 7, 12 or 45 as one of the  $\geq 2$  gene fragments are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 4 embodiment utilizing SEQ ID NO:2 as one of the  $\geq 2$  gene fragments.

An example of duplicate embodiments are: a set consisting of SEQ ID NO:2 and SEQ ID NO:8 versus a set of SEQ ID NO:6 and 8 or a set of SEQ ID NO:7 and 8 or a set of SEQ ID NO:12 and 8 or a set of SEQ ID NO:45 and 8.

9. Claim 4 embodiments utilizing SEQ ID NO:39 as one of the  $\geq 2$  gene fragments are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 4 embodiment utilizing SEQ ID NO:18 as one of the  $\geq 2$  gene fragments.

An example of duplicate embodiments are: a set consisting of SEQ ID NO:18 and SEQ ID NO:8 versus a set of SEQ ID NO:39 and 8.

10. Claim 16 embodiments utilizing SEQ ID NO:6, 7, 12 or 45 as the probe are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 16 embodiment utilizing SEQ ID NO:2 as the probe.

SEQ ID NO:2 is 100% identical to SEQ ID NOs:6, 7, 12 and 45. Therefore, embodiments directed to SEQ ID NO:6, 7, 12, or 45 are claiming the identical invention of claim embodiment directed to SEQ ID NO:2.

11. Claim 16 embodiment SEQ ID NO:39 as the probe is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 16 embodiment SEQ ID NO:18 as the probe.

SEQ ID NO:18 is 100% identical to SEQ ID NO:39. Therefore, embodiments directed to SEQ ID NO:39 are claiming the identical invention of claim embodiment directed to SEQ ID NO:18.

### **Conclusion**

12. Claims 3, 4 and 16 are objected to.

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rodney P. Swartz, Ph.D., Art Unit 1645, whose telephone number is (571) 272-0865. The examiner can normally be reached on Monday through Wednesday from 9:00 AM to 7:30 PM EST. Thursday is the examiner's work at home day.

If attempts to reach the Examiner by telephone are unsuccessful, please contact the Examiner's Supervisor, Robert B. Mondesi (571)272-0956.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Rodney P. Swartz, Ph.D./

Primary Examiner, Art Unit 1645

November 4, 2009